Inventors: Skwarek and Gerber

Docket No.: P11670

CLAIMS:

1. A method of providing medical therapy to a patient, the method comprising

delivering one or more therapeutic stimulation pulses to tissue of a prostate gland via an

implantable medical device.

2. The method of claim 1, further comprising delivering the one or more therapeutic

stimulation pulses to muscle tissue of the prostate gland.

3. The method of claim 1, further comprising delivering the one or more therapeutic

stimulation pulses to treat sexual dysfunction.

4. The method of claim 3, wherein the pulses define pulse widths between

approximately 180 and 450 microseconds, amplitudes between approximately 1 and 10 volts,

and frequencies between approximately 50 and 100 hertz.

5. The method of claim 3, further comprising delivering the one or more therapeutic

stimulation pulses to cause erection.

6. The method of claim 3, further comprising delivering the one or more therapeutic

stimulation pulses to cause ejaculation.

7. The method of claim 3, further comprising delivering the one or more therapeutic

stimulation pulses to prevent ejaculation.

8. The method of claim 3, further comprising delivering the one or more therapeutic

stimulation pulses to prevent premature ejaculation.

9. The method of claim 3, further comprising delivering the one or more therapeutic

stimulation pulses to cause erection and to prevent premature ejaculation.

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10. The method of claim 1, further comprising delivering the one or more therapeutic

stimulation pulses in response to telemetry signals from a patient programmer.

11. The method of claim 1, further comprising delivering the one or more therapeutic

stimulation pulses in response to sensed physiological conditions.

12. The method of claim 1, wherein delivering the one or more therapeutic stimulation

pulses comprises delivering a training sequence of stimulation pulses to train the prostate

gland.

13. The method of claim 12, wherein the pulses define pulse widths between

approximately 10 and 500 microseconds, amplitudes less than approximately 10.5 volts,

frequencies between approximately 2 and 20 hertz, and pulse intervals between

approximately 10 and 500 milliseconds.

14. The method of claim 12, wherein the training sequence defines a first pulse train and

a second pulse train, the second pulse train being delivered after the first pulse train, wherein

the second pulse train includes more pulses per unit time than the first pulse train.

15. The method of claim 12, further comprising delivering the one or more therapeutic

stimulation pulses to train the prostate gland to become more compliant.

16. The method of claim 12, wherein delivering the training sequence comprises

delivering the training sequence to relax a fiber structure of the prostate gland.

17. The method of claim 12, further comprising delivering the training sequence without

causing sexual stimulation.

18. The method of claim 1, further comprising delivering drugs to the prostate gland in

conjunction with delivering the one or more therapeutic stimulation pulses.

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19. A method of providing medical therapy to a patient, the method comprising

delivering a training sequence of stimulation pulses to a prostate gland via an implantable

medical device, the training sequence being defined to change a fiber structure of the prostate

gland.

20. The method of claim 19, further comprising delivering the training sequence to relax

the fiber structure of the prostate gland.

21. The method of claim 19, wherein the pulses define pulse widths between

approximately 10 and 500 microseconds, amplitudes less than approximately 10.5 volts,

frequencies between approximately 2 and 20 hertz, and pulse intervals between

approximately 10 and 500 milliseconds.

22. The method of claim 19, further comprising delivering drugs to the prostate gland in

conjunction with delivering the one or more therapeutic stimulation pulses.

23. The method of claim 19, wherein the training sequence defines a first pulse train and

a second pulse train, the second pulse train being delivered after the first pulse train, wherein

the second pulse train includes more pulses per unit time than the first pulse train.

24. An implantable medical device comprising:

one or more leads including one or more electrodes for implantation adjacent a

prostate gland;

a pulse generator generate therapeutic stimulation pulses and deliver the pulses to the

one or more electrodes via the one or more leads; and

a processor to control the therapy delivery circuit such that the therapeutic stimulation

pulses define a training sequence which causes a fiber structure of the prostate gland to

change.

25. The implantable medical device of claim 24, wherein the training sequence causes the

fiber structure of the prostate gland to relax.

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26. The implantable medical device of claim 24, wherein the training sequence defines a first pulse train and a second pulse train, the second pulse train being delivered after the first pulse train, wherein the second pulse train includes more pulses per unit time than the first pulse train.

27. The implantable medical device of claim 24, wherein the pulses define pulse widths between approximately 10 and 500 microseconds, amplitudes less than approximately 10.5 volts, frequencies between approximately 2 and 20 hertz, and pulse intervals between approximately 10 and 500 milliseconds.

28. An implantable medical device comprising:

means for generating a training sequence of therapeutic stimulation pulses;

means for delivering the training sequence of therapeutic stimulation pulses to a

prostate gland such that the training sequence of therapeutic stimulation pulses cause a fiber structure of the prostate gland to change.

- 29. The implantable medical device of claim 28, wherein the training sequence of therapeutic stimulation pulses cause the fiber structure of the prostate gland to relax.
- 30. A system comprising:

 an implantable medical device that delivers stimulation pulses to a prostate gland; and an agent pump that delivers agents to the prostate gland, wherein the implantable medical device and agent pump are programmed to deliver the stimulation pulses and the agents to the prostate gland in a complimentary fashion.
- 31. The system of claim 30, wherein the stimulation pulses define a training sequence which in conjunction with the agents, causes a fiber structure of the prostate gland to change.
- 32. The system of claim 30, wherein the agent pump comprises an implantable drug pump (IDP).

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33. A method of providing medical therapy to a patient, the method comprising:

delivering a first pulse train to a prostate gland over a first period of time; and

delivering a second pulse train to the prostate gland over a second period of time,

wherein the second pulse train is different than the first pulse train, and wherein delivering

the first and second pulse trains causes a fiber structure of the prostate gland to change.

34. The method of claim 33, wherein the second pulse train defines a pulse rate that is

higher than that of the first pulse train.

35. The method of claim 33, further comprising delivering a third pulse train to the

prostate gland over a third period of time, wherein the third pulse train is different than the

first or second pulse train, and wherein delivering the first, second and third pulse trains

causes a fiber structure of the prostate gland to change.

36. The method of claim 35, further comprising delivering a fourth pulse train to the

prostate gland over a fourth period of time, wherein the fourth pulse train is different than the

first, second or third pulse train, and wherein delivering the first, second, third and fourth

pulse trains causes a fiber structure of the prostate gland to change.

37. The method of claim 36, wherein the fourth pulse train defines a fourth pulse rate that

is higher than that of the third pulse train, the third pulse train defines a third pulse rate that is

higher than that of the second pulse train and the second pulse train defines a second pulse

rate that is higher than that of the first pulse train.

38. An implantable medical device comprising:

a stimulator to deliver stimulation pulses to a prostate gland; and

an agent pump to deliver agents to the prostate gland, wherein the stimulator and

agent pump are programmed to deliver the stimulation pulses and the agents to the prostate

gland in a complimentary fashion.

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39. The device of claim 38, wherein the stimulation pulses define a training sequence which in conjunction with the agents, causes a fiber structure of the prostate gland to change.